Service Manual

Technics by Panasonic

PLAYER UNIT

Technics by Panasonic



⚠ WARNING

This service literature is designed for experienced repair technicians only, and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service literature by anyone else could result in serious injury or death.

MODEL SL-1200

SPECIFICATIONS

TURNTABLE SECTION

Type :	Direct drive player system
Turntable Platter :	Aluminium die-cast ; 33 cm (13") diameter 310 kg·cm² (105.9 lb·in²) inertial moment, 1.75 kg (3.86 lb) weight
Turntable Speeds :	33-1/3 and 45 r.p.m.
Motor :	20 poles (rotor) –15 poles (stator) ultra low-speed DC brushless motor
Power Supply :	AC120V, 60 Hz
Power Consumption :	4 W
Speed Change Method :	Electronical change
Variable Pitch Control :	Individual adjustment by variable resistor, ±5% adjustment range
Wow and Flutter :	Less than 0.03% WRMS
Rumble :	Better than –65 dB (DIN A), –70 dB (DIN B)
Build-up Time :	Within 1/2 rotation at 33-1/3 r.p.m.
Dimensions :	(W) 45.3 cm × (D) 35.3 cm × (H) 18.0 cm (17-13/16" × 13-57/64" × 7-3/32")
Weight :	10 kg (22.1 lb) with dust cover
Player Case :	Aluminium die-cast with audio insulated legs

TONEARM SECTION


Type :	EPA-120 Directly reading stylus pressure, static-balanced type, with pipe arm universal head shell, anti-skating force device.
Effective Length :	220 mm (8-21/32")
Overhang :	14 mm (35/64")
Tracking Error Angle :	Within ±2.0°
Stylus Pressure :	0 – 4 g

(Specifications, design and other details are subject to change, without prior notice, at any time in order to improve performance.)

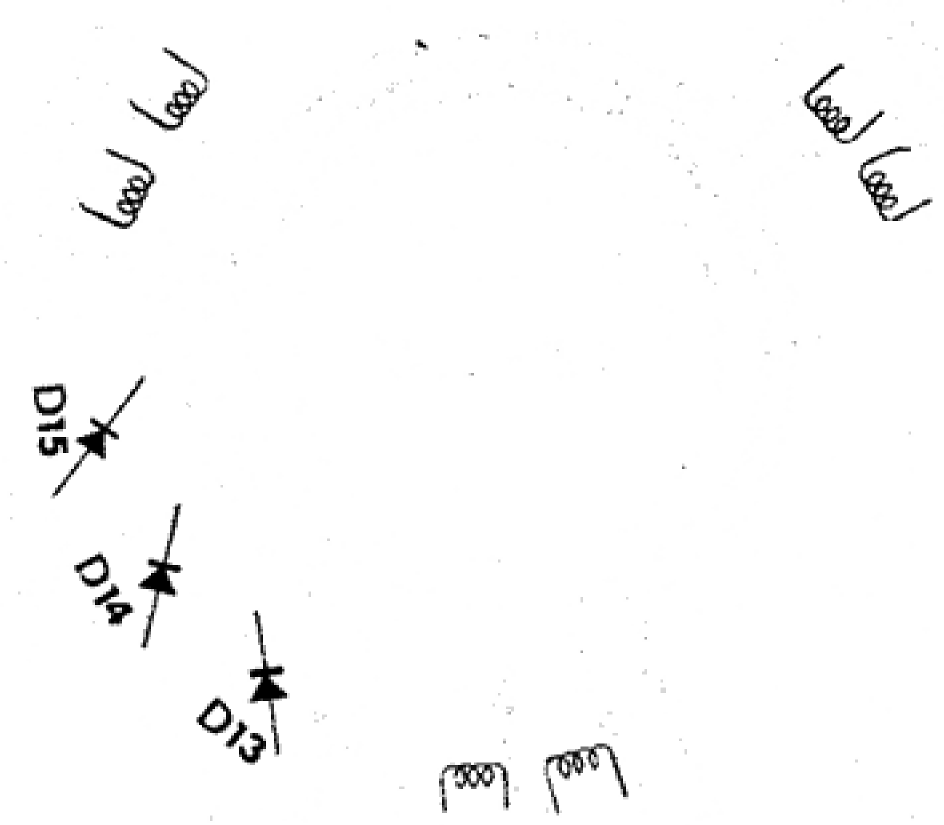
MATSUSHITA ELECTRIC CORP. OF AMERICA Pan Am Bldg., 200 Park Ave., New York, N.Y. 10017
MATSUSHITA ELECTRIC OF HAWAII, INC. 320 Waiakamilo Road, Honolulu, Hawaii 96817
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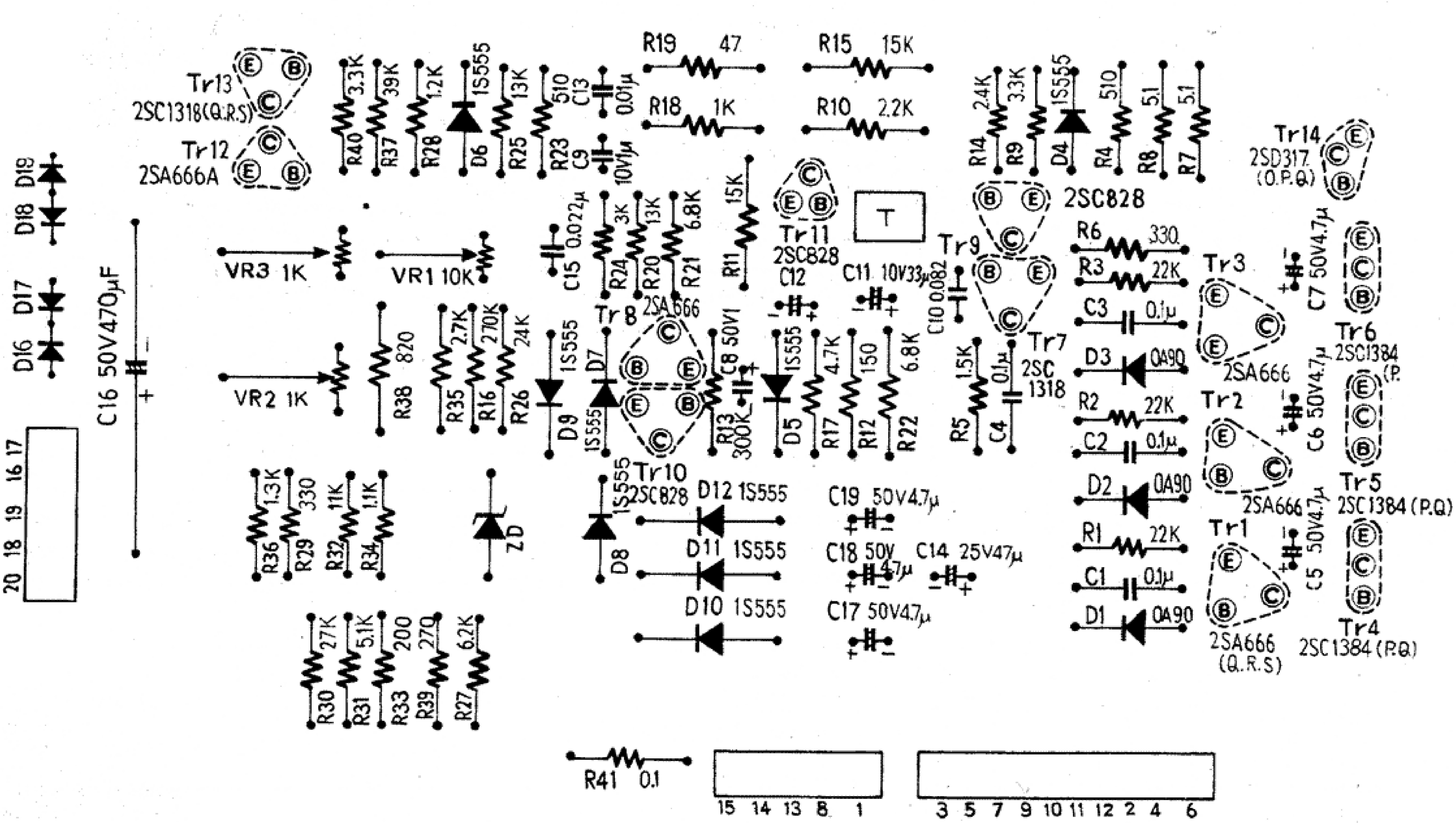
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SCHEMATIC DIAGRAM MODEL SL-1200



CIRCUIT BOARD MODEL SL-1200



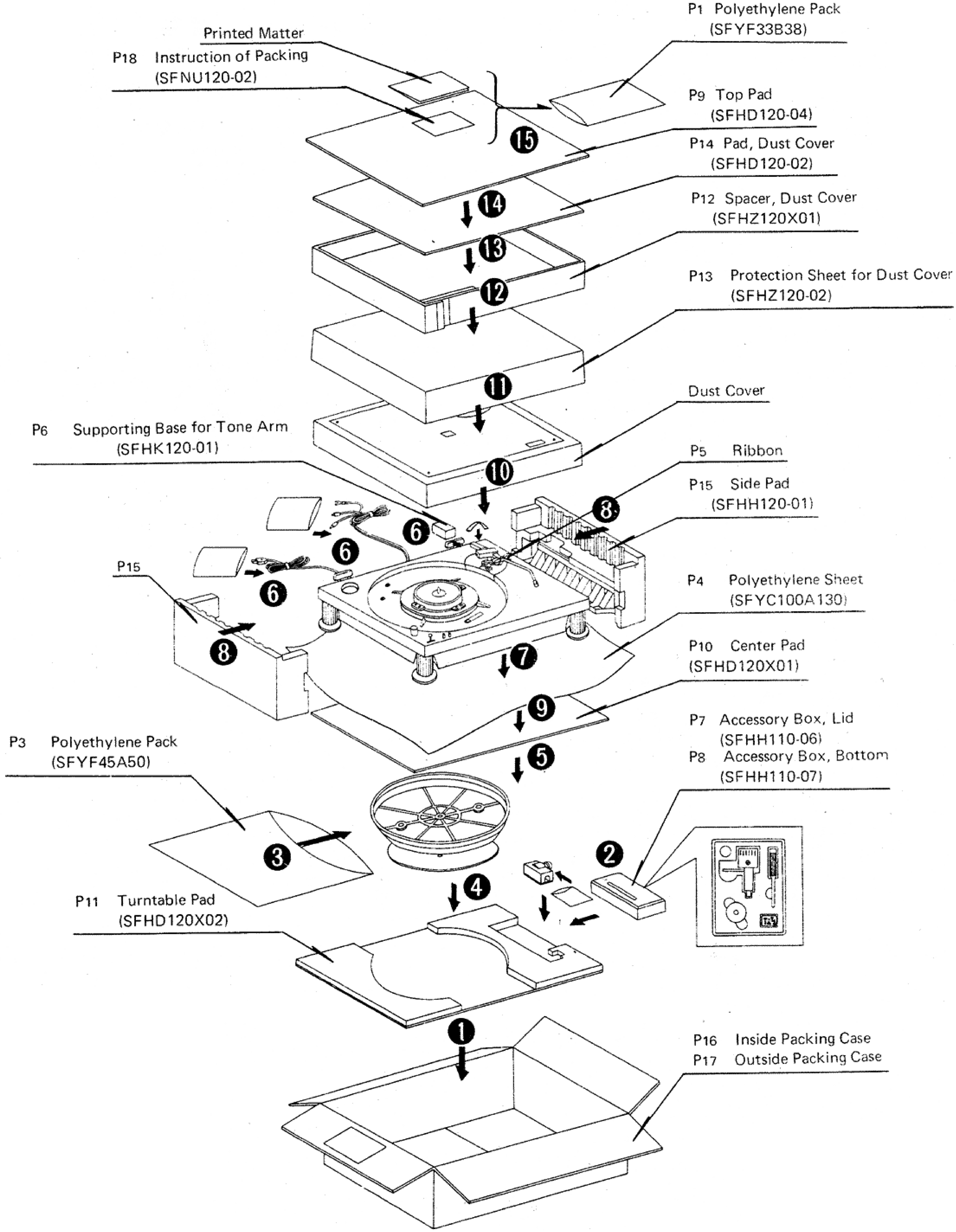


TROUBLE SHOOTING GUIDE

* Except when checking voltage, disconnect the power cord before repair without fail.

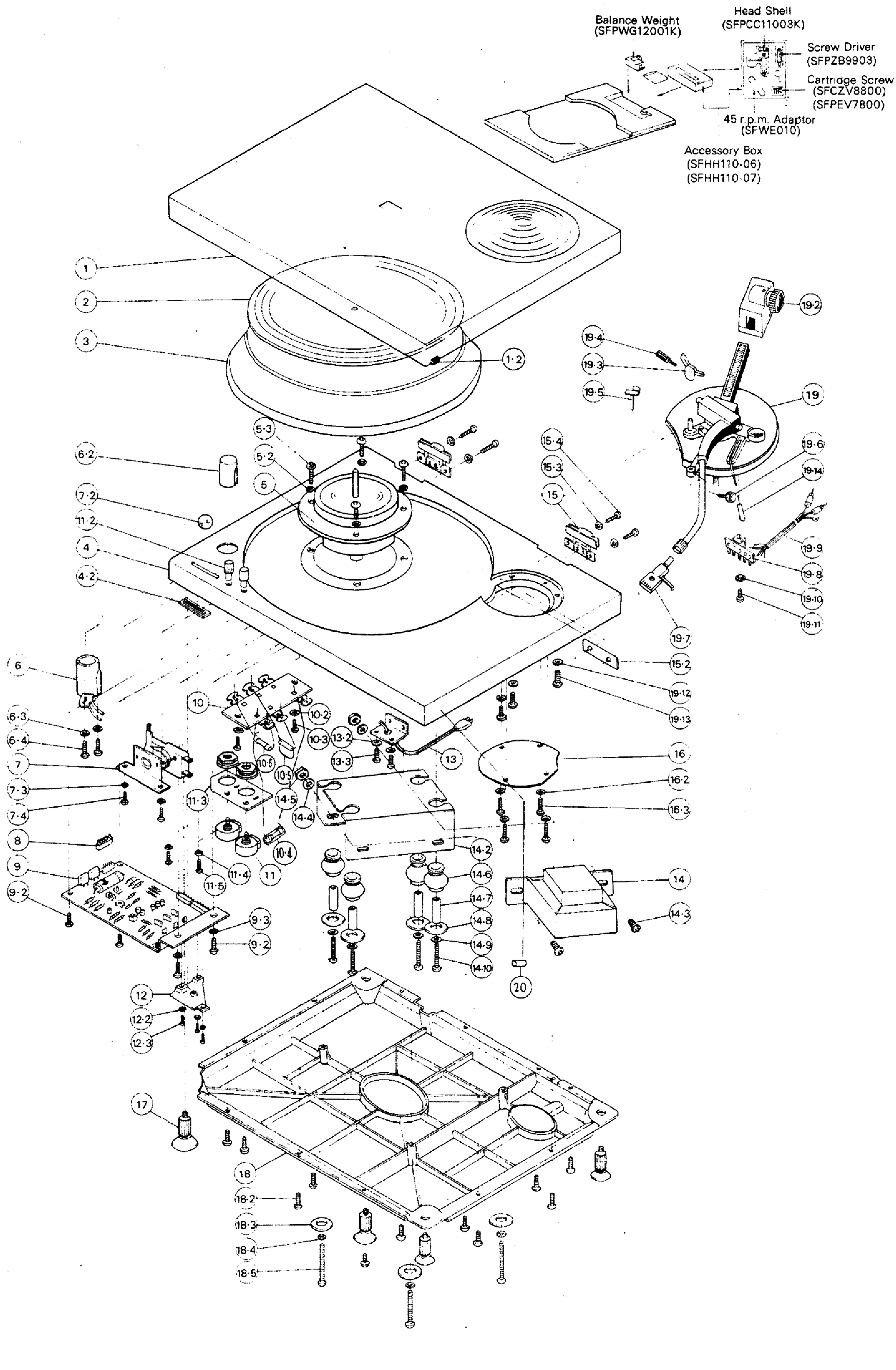
TROUBLE	CAUSE	REMEDY
Turntable Speed A. Switching on does not cause turntable to rotate.	Remove back cover and, using DC voltmeter, check printed base voltage: 1. No output of constant-voltage circuit (between Tr13 collector and (7)) is found. (1) No output on secondary of transformer. • Cord disconnected. • Soldered improperly. Fuse disconnected. • Power transformer defective. (2) Output found on secondary of transformer. • Constant-voltage circuit parts (ZD1, D6 Tr11, Tr12, Tr13) defective. 2. Output of constant-voltage circuit is not 20V. • VR1 defective. • Diode D7, D8, D9, ZD defective 3. Output of constant-voltage circuit is 20V • 3-phase switching circuit (Tr1 ~ Tr6), oscillator circuit (Tr14) defective. • Tr10 defective. 4. Power switch is not ON. • Micro switch defective. 5. Speed selector switch defective. • Contact faulty • Soldered improperly.	 • Replace cord. • Solder securely. • Replace fuse. • Replace power transformer. • Replace printed base assembly. • Replace and adjust semi-fixed resistor VR1 on printed base, so that output of constant-voltage circuit (between TR13 collector and (7) becomes 20V. • Replace printed base assembly. • Replace printed base assembly. • Replace printed base assembly. • Adjust switch mechanism. • Replace micro switch. • Replace speed selector switch. • Solder securely.
B. Turntable speed too fast	• Constant-voltage output is not 20V. • D7, D8, D9, ZD defective. • Speed maladjusted • Diode D10, D11, D12 short.	• Make it become 20V with semifixed resistor VR1. • Replace printed base assembly. • Adjust semi-fixed resistor VR2 or VR3 for rough adjustment. • Replace printed base assembly. (D10, D11, and D12 should be equal in characteristic.)
C. Turntable speed too slow.	• Constant-voltage output is not 20V. • D7, D8, D9, ZD defective. • Speed unadjusted.	• Make it become 20V with semi-fixed resistor VR1. • Replace printed wiring assembly. • Adjust semi-fixed resistor VR2 or VR3 for rough adjustment.
D. Turntable speed varies too much.	• Trouble in 3-phase switching circuit.	• Replace printed base assembly.
E. Turntable, after stopped by hand, will not turn or starts turning but will stop soon.	• 3-phase switching circuit defective.	• Replace printed base assembly.
F. Operative at only one of two speeds ($33\frac{1}{3}$ rpm, 45 rom)	• Selector switch defective. • Lead disconnected or unsoldered. • Contact of VR2, VR3 insufficient.	• Replace selector switch. • Replace lead, or solder securely. • Replace printed base assembly.
Noise Offensive noise is heard.	• Power transformer makes loud noise of vibration. • Broken part of rotor magnet or iron chips attracted by magnet and rubbed by motor case.	• Replace power transformer. • Replace motor.

COMPONENT PACKING PROCEDURE



EXPLODED VIEW OF DIRECT DRIVE PLAYER

Model SL-1200



Ref. No.	Part No.	Description	Per Set (Pcs.)
1	SFAD120E01A	Dust Cover Ass'y	1
1-2	SFGC040L1	Cushion, Dust Cover	2
2	SFTG120-01	Turntable Mat	1
3	SFTE120-01A	Turntable Platter Ass'y	1
4	SFAC120M01A	Player Case	1
4-2	SFGZ120-01	Rubber	1
5	MJL-9A-1	Motor Ass'y	1
5-3	XYN4+C15FUS	Screw (for Motor)	4
6	SFUM120-01A	Strobo Illuminator	1
6-2	SFKZ120-01	Strobo Illuminator Holder	1
6-3	XWA3BF	Spring Washer (for Strobo Illuminator)	2
6-4	XSN3+6FUS	Screw (for Strobo Illuminator)	2
7	ESL-18201U	Main Switch Ass'y	1
7-2	SFKT120-02	Knob, Main Switch Ass'y	1
7-3	XWA3BF	Spring Washer (for Main Switch Ass'y)	2
7-4	XSN3+6FUS	Screw (for Main Switch Ass'y)	2
8	SFDJ12805S	Pin Connector	1
9	SFDP120M01A	Printed Wiring Base Ass'y	1
9-2	XSN3+6FUS	Screw (for Printed Wiring Base Ass'y)	4
9-3	XWA3BF	Spring Washer (for Printed Wiring Base Ass'y)	2
10	SFER010-1E	Terminal Strip Ass'y	1
10-2	XWA3BF	Spring Washer (for Terminal Strip Ass'y)	2
10-3	XSN3+6FUS	Screw (for Terminal Strip Ass'y)	2
10-4	XBAS2B0201	Fuse	1
10-5	ECQB6332HZ	Capacitor	1
10-6	ERG2PSK472	Resistor	1
11	EVHB8A253B13	Variable Resistor	2
11-2	SFKT120-01	Variable Pitch Control Knob	2
11-3	SFUP120-02	Variable Resistor Mounting Plate	1
11-4	XWA3BF	Spring Washer	2
11-5	XSN3+6FUS	Screw	2
12	SFUP120-03	Supporting Plate	1
12-2	XWA5BF	Spring Washer	3
12-3	XSN3+6FVS	Screw	3
13	SFUP120M06A-STP-1	AC Terminal Strip Ass'y	1
13-2	XWA4BF	Spring Washer	2
13-3	XSN4+6FUS	Screw	2
14	ETP57E14A	Power Transformer	1
14-2	SFUP120-04	Transformer Mounting Board	1
14-3	XSN4+8FUS	Screw	2
14-4	XWA4BF	Spring Washer	2
14-5	XNG4HFUS	Nut	2
14-6	SFGC010-1	Cushion Rubber	4
14-7	SFXO850-1	Spacer	4
14-8	SFXW750-1	Washer	4
14-9	XWA3BF	Spring Washer	4
14-10	XSN3+25FUS	Screw	4
15	SFAT120-01E	Hinge Ass'y	2
15-2	SFUP120-01	Hinge Mounting Plate	2
15-3	XWA3BF	Spring Washer	4
15-4	XSN3+10FVS	Screw	4
16	SFUP120-05	PU Shield Board	1
16-3	XSN3+25FUS	Screw	4
17	SFUZ120-01A	Audio-Insulated Leg Ass'y	4
18	SFAU120M01A	Bottom Cover Ass'y	1
18-2	XSB3+8FVS	Screw	11
18-3	SFXW120-01	Washer	3
18-4	XWA3BF	Spring Washer	3
18-5	XSN3+50FVS	Screw	3
19	SFPZ120X01A	Tone Arm Base Ass'y	1
19-2	SFP-WG12001K	Balance Weight	1
19-3	SFP-RT12001	Arm Lift	1
19-4	SFP-EV12005	Screw, Arm Lift	1
19-5	SFP-RT12002	Arm Rest	1
19-6	SFP-EV12001	Screw, Arm Rest	1
19-7	SFP-CC11003K	Head Shell	1
19-8	SFER5B	PU Terminal Strip Ass'y	1
19-9	SFDH120-01	PU Cords	1
19-10	XWA3BF	Spring Washer	1
19-11	XSN3+5FUS	Screw	1
19-12	XWA4BF	Spring Washer	3
19-13	XSN4+8FUS	Screw	3
19-14	SFP-AB12002	Knob, Arm Lift	1
20	SFGZ120-02	Attached to Player Case	2

ACCESSORY PARTS

Ref. No.	Part No.	Description	Per Set (Pcs.)
	SFNU120E01	Printed Matter	1
	SQX7006	Warranty Card	1
	SFWK040L	Wanishing Cloth	1
	SFWO010	Special Oil	1
	SFWE010	45r.p.m Adaptor	1
	SFP-ZB9903	Screw Driver	1
	XSN4+12FUBS	Clamp Screw, Trans.	2
	XSN3+6FUBS	Clamp Screw, Rotor	4
	RQX9028A	Servicenters List	1

PACKING MATERIALS

Ref. No.	Part No.	Description	Per Set (Pcs.)
P1	SFYF33B38	Polyethyiene Pack, Printed Matter	1
P2	SFRPB0006	Polyethylene Pack, Weight, Head Shell Screws, Adaptor	4
P3	SFYF45A50	Polyethylene Pack, Turntable	1
P4	SFYC100A130	Polyethylene Sheet, Player Unit	1
P5	SFYR13C400Y	Ribbon	1
P6	SFHK120-01	Supporting Base for Tone Arm	1
P7	SFHH110-06	Accessory Box, Lid	1
P8	SFHH110-07	Accessory Box, Bottom	1
P9	SFHD120-04	Top Pad	1
P10	SFHD120X01	Center Pad	1
P11	SFHD120X02	Turntable Pad	1
P12	SFHZ120X01	Spacer, Dust Cover	1
P13	SFHZ120-02	Protection Sheet, Dust Cover	1
P14	SFHD120-02	Pad, Dust Cover	1
P15	SFHH120-01	Side Pad	2
P16	SFHP120E01	Inside Packing Case	1
P17	SFHP120E02	Outside Packing Case	1
P18	SFNU120-02	Instruction of Packing	1